



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/644,937 | 08/23/2000 | Anthony Nicholls | 9476-003-999 | 1945 |

24341 7590 05/19/2004

MORGAN, LEWIS & BOCKIUS, LLP.
3300 HILLVIEW AVENUE
PALO ALTO, CA 94304

EXAMINER

MARSCHER, ARDIN H

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1631

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/644,937

Applicant(s)

NICHOLLS, ANTHONY

Examiner

Ardin Marschel

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003 and 21 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-139 is/are pending in the application.
4a) Of the above claim(s) 1-21, 23-26 and 30-139 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-139 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/11/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicants' arguments, filed 3/11/03 and 7/21/03, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

SCOPE OF LACK OF ENABLEMENT

Claims 22 and 27-29 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the construction step (C) according to Blaney et al. and diagonalizing procedure (e) according to Blaney et al. in the specification on page 39 (subject, however, also to the below rejection based on improper incorporation by reference), does not reasonably provide enablement for any construction utilizing a generic distance geometry (claim 22, now lines 8-9) or any generic diagonalizing of G to obtain a set of positions in N-1 dimensional space (claim 22, now lines 10-13). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims.

This rejection is reiterated and maintained as set forth in the previous office action, mailed 9/10/02, and further as necessitated by amendment regarding the distance calculation between molecular properties. Applicant argues that supplying a portion of Blaney et al. supports the enablement of broadly defined distance geometry techniques, citing specifically page 304 of Blaney et al. In response said page 304 fails

Art Unit: 1631

to disclose inter-property distance descriptions, but rather only a metric matrix method directed to inter-atomic distance calculations. Applicant has newly amended claim 22 to be directed to property distance matrix calculations. Thus, the atom to atom distance calculational disclosure on said page 304 does not correspond to the instant claim practice which remains non-enabled. It is noted that a property is not generally a physical item, but rather a characterization which is instantly described as, for example, being a field which overlaps as discussed on page 38 of the instant specification. Such a field property occupies vast regions of space, some fields believed to extend to infinite distances. Thus, the calculation of a distance metric is not a point to point or atom to atom even calculation but rather some type of 3-dimensional volume integration or at least a field calculation without specific points to determine distances between. Page 304 therefore of Blaney et al. fails to provide enablement for generic distance matrix calculation. Applicant goes on to point to page 306 of Blaney et al. for distance geometry calculations and deriving matrix G from D. Again this section of Blaney et al. is directed to distance calculations between atoms or masses within molecules with specific locations and not a property to property distance calculation as now claimed. Thus, this section of Blaney et al. fails to enable the generic distance matrix calculations or matrix conversions as instantly claimed. It is also pointed out that only one alleged distance geometry calculation has been pointed to or argued by applicant as set forth in Blaney et al. on page 306 which at best further supports this lack of scope of enablement rejection because applicant has not pointed to other methods of calculation for matrix conversion thus leaving this as the only potentially enabled scope of

Art Unit: 1631

enablement for the instant claim practice. This rejection is also maintained regarding the N-1 dimensional space unpredictability of diagonalization because as noted above applicant has only argued the application of methodology directed to atom to atom or point to point calculations of distance matrices and not the property to property calculations as instantly claimed including failing to point out what diagonalization practice is performed in N-1 property space for such property calculations..

LACK OF ENABLEMENT

Claims 22 and 27-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

This rejection is reiterated and maintained as set forth in the previous office action, mailed 9/10/02, and further as necessitated by amendment regarding the distance calculation between molecular properties. Applicant argues that Blaney et al. provides a review of calculational methodologies that supports what persons of skill in the art know and thus need not be provided either from a reference such as Blaney et al. or via amending sections of Blaney et al. into the instant specification. In response only one methodology for constructing matrix G from D has been argued as being set forth in Blaney et al. on page 306 albeit with allegations of others. Allegations of other methods have not been supported by any documentary evidence or other facts. Therefore, such arguments of other methods for distance matrix construction of G from

Art Unit: 1631

D are allegations without factual support and therefore non-persuasive. Thus, Blaney et al. apparently still is utilized in the instant disclosure as improperly incorporating by reference essential subject matter for the practice of the instant invention. Applicant also argues that requesting the applicant to amend the specification to include specific details of distance geometry methodology exceeds the general requirements of enablement arguing further that a patent should be addressed to one skilled in the art and not be required to describe, and preferably omit, what is well known in the art. This is acknowledged as to there being no requirement for a patent to describe what is well known in the art, and preferably omit such material. The well known characterization, however, of the distance geometry calculations required for the practice of the instant claims has not been persuasively supported thus leaving Blaney et al. still properly deemed to disclose essential subject matter for the practice of the instant invention via improper incorporation by reference. Applicant argues that the Hawkins legal decisions only are directed to the issue of unavailable British patent applications. The guidance of the MPEP is broader, however, and is still relied on for the guidance therein described.

NON-STATUTORY SUBJECT MATTER

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22 and 27-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

This rejection is reiterated and maintained as set forth in the previous office action, mailed 9/10/02. Applicant argues that the legal decision of State Street Bank...

Art Unit: 1631

is the current standard under applicable law. Applicant supports the application of State Street Bank... by arguing that it is not the form of the manipulations but the outcome upon which patentability is judged, particularly, essential subject matter and its practical utility. In response the State Street Bank... legal decision defines stock market transactions as patentable subject matter. Such practical and patentable subject matter is clearly directed to a physical transformation involving monetary transactions. No such physical transformation is seen in the instant invention or its outcome. Thus, the fact pattern of State Street Bank... differs from the instantly pending claims which only are directed to molecular property calculations and subsequently database searching neither of which goes beyond data manipulation into a physical transformation or even the control of such a transformation in contrast to stock market monetary transfer.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

This application contains claims 1-21, 23-26, and 30-139, drawn to an invention nonelected with traverse in Paper No. 8, filed 6/10/02. A complete reply to the final

Art Unit: 1631

rejection must include cancellation of nonelected claims or other appropriate action (37

CFR 1.144) See MPEP § 821.01.

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (571) 272-0718. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (571) 272-0722.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

May 14, 2004

Ardin H. Marschel 5/14/04
ARDIN H. MARSCHEL
PRIMARY EXAMINER